

Studies on Cicindelids. LVII. Additions to the fauna of New Guinea, and re-depository of some type specimens (Coleoptera: Cicindelidae)

by

Fabio CASSOLA *

With 3 figures

ABSTRACT

Two new species of the genus *Caledonomorpha* are described and figured and two species of the genus *Distipsidera*, previously only known from Australia, are mentioned for the first time from New Guinea. 103 species of Cicindelidae are now known from this region. Re-depository of the type specimens of some other species is also notified.

INTRODUCTION

The Cicindelid fauna of New Guinea has been thoroughly revised just recently (CASSOLA 1987). It showed to be remarkably rich and interesting, with nearly one hundred species known so far from the mainland and the surrounding islands. Moreover, the rate of endemic species appears to be unusually high, three endemic genera comprising more than two thirds of all species. Nevertheless, as it was pointed out in the above mentioned paper, entomological exploration of New Guinea is still far to be completed, large areas remain relatively unknown, and many additions are to be expected in the future as a consequence of more intensive and extensive field research.

The data offered in the present paper represent a first confirmation of that statement. In fact, among some New Guinea materials kindly sent me for identification by Dr. Ivan Löbl (Muséum d'histoire naturelle, Genève, Switzerland), two new *Caledonomorpha* species were found still in need to be described, surprisingly raising up to ten species a

* Via F. Tomassucci 12/20, I-00144 Roma, Italy.

genus which for a long time had been regarded as being monotypic. Moreover, two Australian *Distipsidera* species, previously unrecorded from New Guinea, were discovered among other materials kindly submitted by Dr. R. W. Hornabrook (Wellington, New Zealand), thus raising up to 103 the full number of Cicindelid species known so far from New Guinea. A few data on some other poorly known Papuan species are also added, and re-depository of some type specimens is notified. Thanks are given to my Colleagues I. Löbl and R. W. Hornabrook for their kind and precious co-operation.

Caledonomorpha ullrichi n. sp. (Fig. 1)

DESCRIPTION. Head relatively small, metallic violaceous-black with some bluish-green reflections on clypeus, eyes and cheeks; gular area more or less testaceous. Surface smooth and glabrous, with some very weak wrinkles on eyes and cheeks; two shallow depressions (interocular foveae) on vertex in the middle. Labrum four-haired, subtriangular in the middle, metallic violaceous-black with golden green tinge especially near forward edge. Mandibles long, narrow, brownish-black coloured, briefly testaceous at base; four inner teeth of decreasing length between the apical tooth and the basal molar. Palpi long, slender, testaceous-brown, the last joint darkened and slightly broadened apically. Antennae slender, nearly as long as the body in the male, reaching roughly the elytral half in the female. Scape and articles 2-4 metallic black, nearly completely glabrous; articles 5-11 dark, finely and regularly pubescent.

Pronotum elongate, one and half times longer than wide, subparallel-sided, slightly convergent in front, violaceous-black coloured with some bluish-green reflections on front edge and in transversal grooves; upper surface slightly flattened, entirely smooth and glabrous. Proepisterna also smooth and glabrous, a few shallow wrinkles near notopleural edge. Coupling sulcus of female rather weak, hardly visible, constituted by a shallow dimple on mesepisternum just above the middle. Mesepimera juxtaposed to mesepisterna at nearly a plane angle.

Elytra rather stout, especially in females, the maximum width at the front third; colour black shining with some violaceous reflections, bluish-green tinged apically. Surface glabrous, sparsely covered with small bronze evenly spaced punctures. A rather large dull velvety area extending obliquely on disk from above the middle to subapical dot. Humeral tubercles small but obvious in both sexes, slightly "dropped" laterally, posteriorly sharp, included in a ivory-white humeral dot which is larger in the males than the females. Marginal spot drop-shaped, slightly elongate, entirely placed above the middle; subapical dot large, roundish. Apical spina long, sharp, separated from the sutural angle by a narrow oblique space in the male, a much longer and straighter elytral margin in the female; sutural spina small in the male, much longer in the female, usually the left one overlapping the right one.

Underside light golden green, with some bluish or violaceous reflections on sternum and mesepisterna, slightly golden-cupric on pro- and metepisterna. Abdominal sternites darker, with cupric reflections at sides of first ones; edges of last two sternites more or less testaceous-brown. Legs slender, very long, metallic brownish-black, with tibiae and hind tarsi more or less rufescent apically; coxae, trochanters and basal half of femora testaceous.

Aedeagus very typical, large, stout, bulky, strongly bent after base, with a large spatulate vertical apex which protrudes with a marked tooth both ventrally and dorsally.

Length: 13-15 mm (without labrum).

Holotype ♂, allotype ♀ and 16 paratypes (7♂♂ 9♀♀) from PAPUA NEW GUINEA (Morobe Province): env. of Gurakor, 5 km above, I-II.1981, W. G. Ullrich leg. Holotype, allotype and 10 paratypes in the Muséum d'histoire naturelle, Genève, Switzerland; six paratypes in author's collection.

DERIVATIO NOMINIS. This new remarkable species is named after its collector, Mr. W. G. Ullrich, who lived and taught three years at Onerunka (Morobe Province) and collected interesting materials from several localities in Papua New Guinea.

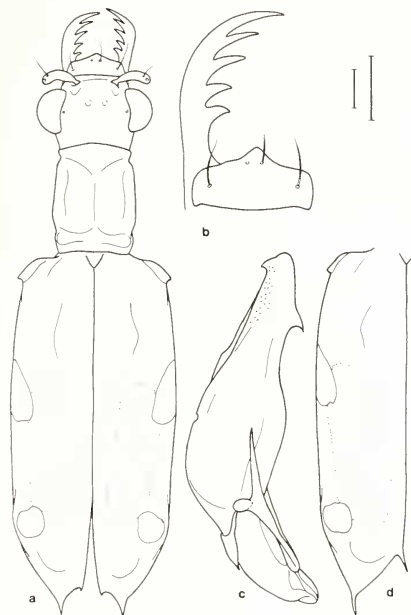


FIG. 1.

Caledonomorpha ullrichi n. sp., paratype ♂: habitus, labrum and left mandible, aedeagus (a, b, c); paratype ♀: left elytron. Scale lines = 1 mm.

REMARKS. *C. ullrichi* n. sp. is a large unmistakable species, easily recognized from congeneric ones by its dark coloration, shape of aedeagus, and weak coupling sulci of females. *C. papuana* Ward is a similarly sized species, but it may be easily distinguished by brown-piceous general colour, the much different male aedeagus, more elongate mesepisterna, and lack of female coupling sulci (WARD 1981).

***Caledonomorpha loebli* n. sp. (Fig. 2)**

DESCRIPTION. Head metallic black, with bluish-green reflections on clypeus, cheeks and base of antennae; gular area more or less testaceous. Surface smooth and glabrous, slightly striated on cheeks and eyes; two shallow dimples (interocular foveae) on vertex in the middle. Labrum four-haired, transverse and short in both sexes, brownish-black coloured with metallic green reflections on disk and the setigerous punctures. Mandibles dark brown, basally testaceous, rufescent on teeth; four inner teeth (third tooth shorter than others) between the apical tooth and the basal molar. Labial and maxillary palpi long and slender, testaceous, the last joint brown-black, slightly testaceous at base and apex. Antennae slender, long up to the elytral half in the female, reaching the subapical dot in the male. Scape and articles 2-4 dark brown with metallic reflections, nearly glabrous, a single seta on scape at apex; articles 5-11 brown, finely and regularly pubescent.

Pronotum slightly longer than wide, somewhat swelling on disk, subparallel-sided, slightly convergent in front, maximum width behind the middle; entirely smooth and glabrous, metallic black coloured with green reflections on transversal grooves and sometimes the lateral edges as well. Proepisterna smooth and glabrous. Coupling sulcus of female well-marked, constituted by a deep cavity placed about the middle on mesepisterna, next to the pleural suture. Mesepimera juxtaposed to mesepisterna at obtuse to nearly right angles.

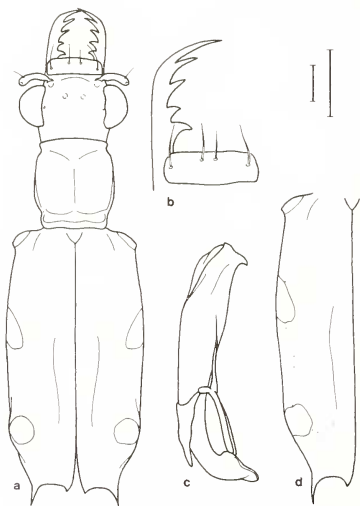


FIG. 2.

Caledonomorpha loebli n. sp., paratypus ♂: habitus, labrum and left mandible, aedeagus (a, b, c); paratypus ♀: left elytron. Scale lines = 1 mm.

Elytra shining black with some bronze reflections, the apical part tinged with bluish-green; a large dull velvety area on disk, extending from the marginal spot to subapical dot. Surface regularly covered with sparse small bronze-green punctures. A marked depression on disk behind the basal callus, close to the suture, followed by a slight iuxtasutural carina bordering the dull discal area towards elytral apex. Humeral tubercles as in *C. darlingtoni* Cassola, slightly less marked, fully included in the ivory-white humeral dot, clearly visible from above; marginal spot drop-shaped, slightly oblique on disk, entirely placed above the middle; subapical dot large, roundish. Apical spinae strong, long and straight, slightly divergent each other, separated from the sutural angle by a straight transverse margin, equally sized in both sexes; sutural spina strong, subtriangular, slightly obtuse.

Underside metallic green with bluish or golden reflections; last abdominal sternites largely testaceous. Coxae, trochanters and base of femora testaceous, legs metallic dark brown with violaceous reflections.

Male aedeagus nearly identical to that of *C. darlingtoni*, stout, stocky, apically truncated, ventrally produced into a short point.

Length: 11-13 mm (without labrum).

Holotype ♂ and 10 paratypes (7♂♂ 3♀♀) from PAPUA NEW GUINEA (Morobe Province): env. of Gurakor, II.1981, W. G. Ullrich leg.; allotype ♀ and a paratype ♀ from 5 km above Gurakor, I.1981, W. G. Ullrich leg. Holotype, allotype and 7 paratypes in the Muséum d'histoire naturelle, Genève, Switzerland; four paratypes in author's collection.

DERIVATIO NOMINIS. I have the pleasure of dedicating this unexpected new species to Dr. Ivan Löbl (Muséum d'histoire naturelle, Genève, Switzerland), who kindly submitted for study some Cicindelid materials from New Guinea, in acknowledgment of his helpful co-operation.

REMARKS. *C. loebli* n. sp. is obviously a near relative of *C. darlingtoni* Cassola, which it resembles very much in general habitus and in shape of aedeagus. Nevertheless, it distinctly differs from that species by the shorter and stouter body shape, the darker colour, the different conformation of apical margins and spinae, and especially the well-marked coupling sulci of females (nearly lacking in *C. darlingtoni*). As far as the body colour is concerned, *C. loebli* rather resembles *C. sedlaceki* Cassola, a geographically close species which, however, may be distinguished by the much smaller size, shorter square pronotum, and much different male aedeagus. From *C. ullrichi* mihi, here above described, *C. loebli* is easily recognizable by the lesser size, shorter legs, much different shape of aedeagus, and well marked female coupling sulci. Both species appear to occur sympatrically, presumedly in different ecological situations which unfortunately are not known so far, in the same type-locality (Gurakor, near Wau, approximate co-ordinates 7°20'S-146°43'E), thus extending further West the known range of the genus *Caledonomorpha* (CASSOLA 1987) (Fig. 3).

Caledonomorpha poggii Cassola, 1987

Thanks to the courtesy of Mrs. Cynthia Milkint-Salvino, collection manager of the Field Museum of Natural History (Chicago, USA), I could examine the ♀ specimen from Jawarere (Central Province, 14.IV.1918, J. T. Zimmer leg.) which had been mentioned by MANDL (1964) under *C. jordani* W. Horn, and by WARD (1981) under *C. milneana* Darlington. As I suspected for (CASSOLA 1987), this specimen resulted to be in reality *C. poggii*, thus individuating a new locality for this species in addition to topotypical one (Astrolabe Mts.) (Fig. 3).

***Caledonomorpha sedlaceki* Cassola, 1987**

The ♂ holotype of this species (Garaina, Morobe Province, J. H. Sedlacek leg.), formerly in author's collection, has been deposited in the holdings of the Bishop Museum, Honolulu, Hawaii, following a special agreement with Mr. G. A. Samuelson, Curator for Entomology of that Institution.

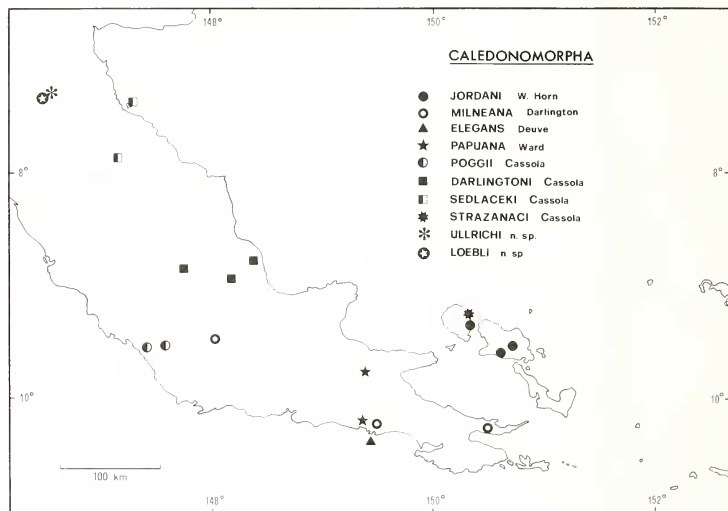


FIG. 3.

Distribution of species of *Caledonomorpha*.

***Distipsidera papuana* Gestro, 1879**

Large numbers of this endemic species, previously known by its three type specimens only (GESTRO 1879, CASSOLA 1987), were found by Dr. R. W. Hornabrook near Rouku village, in the Morehead district of Papua New Guinea (Western Province), on 10 November 1974, at the end of the dry season. Some specimens were collected on two isolated Eucalypts standing in open Imperata grassland ninety metres from the nearest forest, others were found on rain forest trees in open gallery forest along the Morehead River in the same district (R. W. Hornabrook, pers. comm.). Dr. Hornabrook has been so kind to give me three specimens for my own collection.

***Distipsidera gruti* Pascoe, 1862**

This well-known Australian species was surprisingly found by Dr. R. W. Hornabrook in smaller numbers on the same trees as *D. papuana*. The specimens were always exposed to the warmth of the sun; when disturbed, they would fly off to adjoining trunks, but an hour or so later they would always seem to have returned to their favourite tree (Hornabrook, pers. comm.). A single specimen (Morehead, Western Province, 10.XI.1974, tree trunks, R. W. Hornabrook leg.) is now in author's collection. The species as a whole appears to be new for New Guinea fauna.

***Distipsidera hackeri* Sloane, 1906**

A few specimens of this poorly known Australian species, described by SLOANE (1906) from Coen, Queensland, and apparently never collected again, were surprisingly found by Dr. R. W. Hornabrook on same spot and trees, together with the preceding species. A quite large species, it was easily mistook for *D. gruti* when in the field. A couple of specimens (Morehead, Western Province, 10.XI.1974, tree trunks, R. W. Hornabrook leg.) stand now in author's collection. *D. hackeri* too appears to be new for New Guinea, thus showing that this Australian genus is well-represented in the Papuan Subregion.

***Polyrhanis perrinae* Cassola, 1987**

The ♀ allotype of this species (Schleinitz Mts., New Ireland, X.1959, W. W. Brandt leg.), formerly in author's collection, has been deposited in the holdings of the Bishop Museum, Honolulu, Hawaii.

***Polyrhanis paulae* Cassola, 1987**

The ♂ holotype of this species (Kiunga, Western Province, 1978, J. H. Sedlacek leg.), formerly in author's collection, has been deposited in the Bishop Museum, Honolulu, Hawaii.

***Polyrhanis olthofi* (Brouerius van Nidek, 1959)**

Three additional specimens from East Sepik Province, Papua New Guinea (Amboin, Karawari River, VI.1974, R. W. Hornabrook leg.), appear to belong to this poorly known species. A single male now in author's collection, a pair ♂ ♀ in Hornabrook's collection (National Museum, Wellington, New Zealand).

***Polyrhanis samuelsoni* Cassola, 1987**

Two additional specimens of this species appear to have been collected by R. W. Hornabrook in a different locality of Western Province, Papua New Guinea (Nomad, 25.X.1974, 1♂ 1♀). They both stand in Hornabrook's collection (National Museum, Wellington, New Zealand).

***Leptognatha pseudovelutina* Cassola, 1987**

The single ♂ holotype (Tapini, Goilala, Owen Stanley Range, Central Province, XI.1957, J. Sedlacek leg.), formerly in author's collection, has been deposited in the Bishop Museum, Honolulu, Hawaii.

Leptognatha curvidentis Cassola, 1987

The single ♂ holotype (Kuper Range, 40 km SE of Salamaoua, Morobe Province, 24.I.1969, J. H. Sedlacek leg.), formerly in author's collection, has been deposited in the Bishop Museum, Honolulu, Hawaii.

Leptognatha papua Cassola, 1987

The ♂ holotype of this species (Fly River, Western Province, V.1978, J. H. Sedlacek leg.), formerly in author's collection, has been deposited in the holdings of Bishop Museum, Honolulu, Hawaii.

RIASSUNTO

Studi sui Cicindelidi. LVII. Aggiunte alla fauna della Nuova Guinea, e nuova collocazione dei tipi di alcune specie (Coleoptera, Cicindelidae).

Il presente lavoro costituisce un primo supplemento alla fauna cicindelologica della Nuova Guinea, già oggetto, proprio recentemente, di approfondita revisione (CASSOLA 1987). Alle 99 specie accertate in quella sede, vengono aggiunte ora due nuove specie di *Caledonomorpha* (portando così a dieci il numero di specie finora noto per questo genere, a lungo erroneamente ritenuto monotipico), nonché due specie australiane del genere *Distipsidera* che sono risultate nuove per la Nuova Guinea. Vengono inoltre forniti nuovi dati su alcune altre poco note specie, e reso noto il deposito presso il Bishop Museum (Honolulu, Hawaii) dei tipi di alcune altre.

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